

(FILE 'HOME' ENTERED AT 16:49:07 ON 27 JUN 2003)

FILE 'REGISTRY' ENTERED AT 16:51:30 ON 27 JUN 2003

L1 STRUCTURE UPLOADED

L2 30 S L1

L3 10050 S L1 FULL

FILE 'CAPLUS' ENTERED AT 16:52:24 ON 27 JUN 2003

L4 3857 S L3

L5 3097 S L4 AND PY<2001

L6 0 S L5 AND NAGY, SANDOR M./AU

=> d 15 1-50 bib abs

L5 ANSWER 1 OF 3097 CAPLUS COPYRIGHT 2003 ACS

AN 2002:586622 CAPLUS

DN 137:268913

TI A theoretical study on Al-CVD using dimethylethylamine alane

AU Tsujii, Hideji; Nakajima, Tohru; Yamashita, Koichi

CS Department of Chemistry System Engineering, Graduate School of Engineering, University of Tokyo, Tokyo, 113-8656, Japan

SO Advanced Metallization Conference 2000, Proceedings of the Conference, San Diego, CA, United States, Oct. 2-5 and University of Tokyo, Tokyo, Japan, Oct. 19-20, 2000 (2000), 685-690. Editor(s): Edelstein, Dan.

Publisher: Materials Research Society, Warrendale, Pa.

CODEN: 69CXY4; ISBN: 1-55899-574-9

DT Conference

LA English

AB The reaction mechanism of the Al-CVD process using dimethylethylamine alane (DMEAA) as the source gas was theor. studied. It was found that: (1) the DMEAA dissocs. into DMEA and AlH<sub>3</sub> on the Al(111) surface, and not in the gas phase; (2) that AlH<sub>3</sub> dissocs. into AlH and two H atoms on Al(111) with an activation energy of 8.7 kcal/mol; and (3) that the rate detg. step is the formation of H mols. from adsorbed H atoms.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 2 OF 3097 CAPLUS COPYRIGHT 2003 ACS

AN 2002:290810 CAPLUS

DN 136:310333

TI Linear phosphine-borane polymers and their preparation

IN Manners, Ian; Dorn, Hendrik

PA Can.

SO U.S., 8 pp.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6372873	B1	20020416	US 2000-541717	20000403
	CA 2302181	AA	20001001	CA 2000-2302181	20000324 <--
PRAI	CA 1999-2268218	A	19990401		

AB Linear backbone P-B polymers have structure [PR<sub>1</sub>R<sub>2</sub>BR<sub>3</sub>R<sub>4</sub>]<sub>n</sub>, where R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, and R<sub>4</sub> = H, optionally substituted alkyl, alkenyl and Ph; and n .gtoreq.2, and particularly high mol. wt. polymers of wt.-av. mol. wt. .gtoreq.10,000. The polymers are of use as fire retardants. PhPH<sub>2</sub>.BH<sub>3</sub> (8.27 mmol) and (Rh[1,5-cod]2)[OTf] (0.1 mol%) were heated at 90.degree. for 14 h in PhMe and pptn. of the product from hexane gave air-stable poly(Ph phosphinoborane), yield 0.678 g (67%).

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 3 OF 3097 CAPLUS COPYRIGHT 2003 ACS  
 AN 2002:45655 CAPLUS  
 DN 137:33348  
 TI A new organodithiophosphoric derivative; synthesis and structural characterization of bis(diphenylborano)dithiophosphoric [(C<sub>6</sub>H<sub>5</sub>)<sub>2</sub>BO]<sub>2</sub>P(S)SH  
 AU Gabriela, Cretiu; Reka, Torok; Delia, Bugnariu; Oxana, Jeman; Silaghi-Dumitrescu, Ioan  
 CS Universitatea "Babes-Bolyai", Facultatea de Chimie si Inginerie Chimica, Cluj-Napoca, RO-3400, Rom.  
 SO Studia Universitatis Babes-Bolyai, Chemia (1999), 44(1-2), 177-182  
 CODEN: SUBCAB; ISSN: 1224-7154  
 PB Studia Universitatis Babes-Bolyai  
 DT Journal  
 LA English  
 OS CASREACT 137:33348  
 AB A new organo deriv. of dithiophosphoric acid (RO)<sub>2</sub>P(S)SH was obtained by the reaction of P pentasulfide (P<sub>4</sub>S<sub>10</sub>) with diphenylborinic acid. IR, <sup>1</sup>H, <sup>13</sup>C, <sup>11</sup>B and <sup>31</sup>P NMR spectra of intermediates and the main product are discussed. Geometrical parameters (distances in Å, angles in degrees) for the min. energy structure were studied by ab initio RHF/3-21G\* using Spartan version 5.0 installed on a SGI Octane.  
 RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 4 OF 3097 CAPLUS COPYRIGHT 2003 ACS  
 AN 2001:774627 CAPLUS  
 DN 136:263075  
 TI Synthesis of 8-bromoisoquinolines and a crystal structure of an acyclic secondary amine-borane  
 AU Armengol, Montserrat; Helliwell, Madeleine; Joule, John A.  
 CS Chem. Dep., The Univ. of Manchester, Manchester, M13 9PL, UK  
 SO ARKIVOC [online computer file] (2000), 1(5), 823-842  
 CODEN: AKVCFI  
 URL: <http://www.arkat.org/arkat/journal/Issue5/ms0083/ms0083.pdf>  
 PB ARKAT Foundation  
 DT Journal; (online computer file)  
 LA English  
 AB 8-Bromo-7-methoxyisoquinoline was produced by Jackson's modification of the Pomeranz-Fritsch ring synthesis accompanied by 8-bromo-3-(8-bromo-7-methoxyisoquinolin-4-yl)-1,2,3,4-tetrahydro-7-methoxy-2-(4-methylphenylsulfonyl)isoquinoline. A mechanism for the formation of the latter is suggested. The ready formation of secondary amine-BH<sub>3</sub> complexes was noted and the x-ray crystal structure of N-(2-bromo-3-methoxybenzyl)aminoacetaldehyde di-Me acetal borane detailed.  
 RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 5 OF 3097 CAPLUS COPYRIGHT 2003 ACS  
 AN 2001:286232 CAPLUS  
 DN 135:46225  
 TI Thermolysis of alkoxyaluminum and siloxyaluminum acylates  
 AU Stepovik, L. P.; Kazakina, S. V.; Martynova, I. M.  
 CS Lobachevskii Nizhni Novgorod State University, Nizhniy Novgorod, Russia  
 SO Russian Journal of General Chemistry (Translation of Zhurnal Obshchei Khimii) (2000), 70(9), 1371-1377  
 CODEN: RJGCEK; ISSN: 1070-3632  
 PB MAIK Nauka/Interperiodica Publishing  
 DT Journal  
 LA English  
 AB Thermolysis of alkoxyaluminum acylates (RO)<sub>n</sub>Al(OCOR')<sub>3-n</sub> (n = 1, 2; R = i-Pr, s-Bu, t-Bu, R' = Ph, CH<sub>2</sub>I; R = PhCH<sub>2</sub>, R' = Me, Et, Ph; R = Me<sub>3</sub>Si, Et<sub>3</sub>Si, R' = Me) was studied. The main direction of thermolysis of derivs. of primary and secondary alcs. and of unsubstituted carboxylic acids is

ester and alc. formation. Trialkylsiloxyaluminum acylates thermolyze to give in the first stage no other products than trialkylacyloxysilanes. Thermolysis of iodoacylates (RO)2AlOCOCH2I (R = Pr, s-Bu) involves oxidn. of the alkoxy group to carbonyl compds. with simultaneous formation of a ketene and hydrogen iodide. Tert-Butoxyaluminum acylates regardless of the structure of substituent in the acyloxy group undergo symmetrization to aluminum tert-butylate.

RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 6 OF 3097 CAPLUS COPYRIGHT 2003 ACS  
AN 2001:229911 CAPLUS  
DN 134:259448  
TI Crystal structure of (1.alpha.,5.beta.,8.beta.,8a.beta.)-1-methyl-1,2,3,5,8,8a-hexahydro-5,8-epoxyquinoline(N-B)borane, C9H10NO(CH3)(BH3)  
AU Peters, K.; Peters, E.-M.; Drinkuth, S.; Groetsch, S.; Christl, M.  
CS Max-Planck-Institut fur Festkorperforschung, Stuttgart, D-70506, Germany  
SO Zeitschrift fuer Kristallographie - New Crystal Structures (2000), 215(4), 600  
CODEN: ZKNSFT; ISSN: 1433-7266  
PB R. Oldenbourg Verlag  
DT Journal  
LA English  
AB Crystals of the title compd. are monoclinic, space group P21/c, a 7.764(1), b 17.758(2), c 7.869(1) .ANG., .beta. 113.28(1).degree.; Z = 4; Rgt(F) = 0.056, Rw ref(F2) = 0.165; T = 293 K. At. coordinates are given.  
RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 7 OF 3097 CAPLUS COPYRIGHT 2003 ACS  
AN 2001:224480 CAPLUS  
DN 134:237659  
TI Process for preparing chiral phosphine-borane complex and application in synthesizing amino acids  
IN Zhang, Shengyong; Jiang, Ru; Li, Xiaoye; Zhang, Bangle; Sun, Xiaoli  
PA Peop. Rep. China  
SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 8 pp.  
CODEN: CNXXEV  
DT Patent  
LA Chinese  
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI CN 1264707	A	20000830	CN 1999-100814	19990223 <--
PRAI CN 1999-100814		19990223		

OS CASREACT 134:237659  
AB The chiral complex (COD) [R- ethylenebis(diphenylphosphine)]rhodium(I) hexafluorophosphate (COD = cyclooctadiene; R = Ph or cyclohexyl) is prepd. by esterifying R-glycol with methanesulfonyl chloride in the presence of pyridine to obtain R-glycol dimethanesulfonate; substituting with triphenylphosphine-borane in THF in the presence of Li and tert-Bu chloride to obtain (S)-R- ethylenebis(diphenylphosphine)-bis(borane) (1:2), decomp. with HFB4/ethyl ether to obtain (S)-R- ethylenebis(diphenylphosphine), and complexing with [Rh(COD)Cl]2 and KPF6 in dichloromethane. The chiral complex is used as asym. hydrogenation for synthesis of amino acid deriv. Me L-phenylalaninate and Me L-alaninate are synthesized by hydrogenating 2-acetamidocinnamic acid or 2-acetamidoacrylic acid, and hydrolyzing and esterifying with methanol in the presence of H2SO4.

L5 ANSWER 8 OF 3097 CAPLUS COPYRIGHT 2003 ACS  
AN 2001:220487 CAPLUS  
DN 134:237658  
TI Synthesis of chiral phosphine-borane complex and its application in

asymmetric hydrogenation

IN Zhang, Shengyong; Sun, Xiaoli; Li, Xiaoye  
PA Peop. Rep. China  
SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 6 pp.  
CODEN: CNXXEV  
DT Patent  
LA Chinese  
FAN. CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CN 1264706	A	20000830	CN 1999-100813	19990223 <--
PRAI	CN 1999-100813		19990223		

OS CASREACT 134:237658

AB The chiral complex (cyclooctadienyl)[(1S,2S)-1,2-diphenylethylenebis(diphenylphosphine)]rhodium(I) hexafluorophosphate is synthesized by adding (E)-1,2-diphenylethylene in tert-butanol/water in the presence of methanesulfonamide at 0.degree. for 12 h and at room temp. for 11 h, extg. to obtain (1S,2S)-1,2-diphenyl-1,2-ethanediol; mesylating with methanesulfonyl chloride in the presence of pyridine at 0.degree. for 3 h and at room temp. for 2 h, extg. to obtain (1S,2S)-1,2-diphenyl-1,2-ethanediol dimethanesulfonate; substituting with triphenylphosphine-borane in THF in the presence of Li at room temp. for 9 h, extg. to obtain (1S,2S)-1,2-diphenylethylenebis(diphenylphosphine)borane, decomp. with HBF<sub>4</sub>/ethyl ether to obtain (1S,2S)-1,2-diphenylethylenebis(diphenylphosphine), complexing with rhodium(I) chloride dimer in dichloromethane/water in the presence of excess KPF<sub>6</sub> for 30 min under bubbling N<sub>2</sub>, distg. to remove solvent, and pptg. in ethanol. The chiral complex is used as asym. hydrogenation for prepn. of L-amino acid or its deriv. such as phenylalanine, alanine, and dopamine with optical purity of >90%. Me L-alaninate is prepd. by hydrogenating 2-acetamidoacrylic acid in methanol at room temp. and H<sub>2</sub> pressure of 20 kg/cm<sup>2</sup> for 20 h, and hydrolyzing and esterifying with methanol. Me L-phenylalaninate and L-N-acetyldopamine deriv. are prepd. from 2-acetamidocinnamic acid and 2-acetamido-4'-hydroxy-3'-methoxycinnamic acid, resp.

L5 ANSWER 9 OF 3097 CAPLUS COPYRIGHT 2003 ACS

AN 2001:202219 CAPLUS

DN 134:229853

TI MOVPE-growth and characterization of AlGaAs/GaAs v-groove quantum wires

AU Kaluza, Andreas

CS Inst. Schicht- und Ionentechnik, Germany

SO Berichte des Forschungszentrums Juelich (2000), Juel-3805, i-vi, 1-147

CODEN: FJBEE5; ISSN: 0366-0885

DT Report

LA German

AB The MOVPE-growth of v-groove quantum wires was studied. The aim was to prep. quantum wires, on which 1D transport can be studied. This requires high quality material as well as a large subband spacing, which is influenced by the geometry of the structures. To achieve this, the influence of growth temp. and different metalorg. precursors on the geometry and the material quality of the GaAs quantum wells and the AlGaAs barriers was examd. First a parameter window was detd., in which high quality material can be achieved. Within this window the influence on the geometry of the quantum wires was examd. Here it was found that the growth temp. and the choice of the Ga precursor have the biggest influence. By solving the Schrodinger equation the geometry which gives the highest subband spacing was detd. In this way parameters were found, that lead to quantum wires with the desired properties.

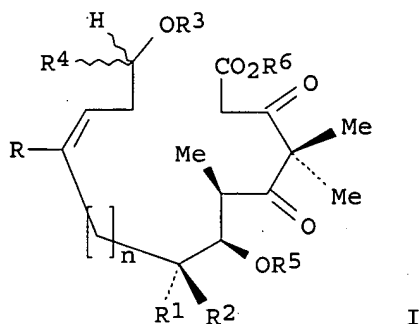
RE. CNT 111 THERE ARE 111 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 10 OF 3097 CAPLUS COPYRIGHT 2003 ACS

AN 2001:195837 CAPLUS

DN 134:222565  
 TI Synthesis of epothilones, intermediates and analogs for use in treatment of cancers with multidrug-resistant phenotype  
 IN Danishefsky, Samuel J.; Bertinato, Peter; Su, Dai-Shi; Meng, Dongfang; Chou, Ting-Chao; Kamenecka, Ted; Sorensen, Erik J.; Balog, Aaron; Savin, Kenneth A.; Kuduk, Scott; Harris, Christina; Zhang, Xiu-Guo; Bertino, Joseph R.  
 PA Sloan-Kettering Institute for Cancer Research, USA  
 SO U.S., 164 pp., Cont.-in-part of Ser. No. US 1997-986025, filed on 3 Dec 1997  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6204388	B1	20010320	US 1999-257072	19990224
	US 6242469	B1	20010605	US 1997-986025	19971203
	ZA 9901497	A	19990824	ZA 1999-1497	19990224 <--
	US 6316630	B1	20011113	US 2000-588925	20000606
	US 6300355	B1	20011009	US 2000-662426	20000913
	US 6369234	B1	20020409	US 2000-686158	20001011
	US 6284781	B1	20010904	US 2000-691615	20001018
	US 2002058286	A1	20020516	US 2001-797027	20010301
	US 2002002194	A1	20020103	US 2001-874514	20010605
	US 2003105330	A1	20030605	US 2002-62376	20020201
	US 2003069277	A1	20030410	US 2002-135433	20020430
PRAI	US 1996-32282P	P	19961203		
	US 1997-33767P	P	19970114		
	US 1997-47566P	P	19970522		
	US 1997-47941P	P	19970529		
	US 1997-55533P	P	19970813		
	US 1997-986025	A2	19971203		
	US 1998-75947P	P	19980225		
	US 1998-92319P	P	19980709		
	US 1998-97733P	P	19980824		
	US 1999-257072	A3	19990224		
	US 2000-680493	B1	20001005		
OS	MARPAT 134:222565				
GI					



AB Syntheses of epothilone A and B, desoxyepothilones A and B, and protected ketoester precursors (I) [R,R1,R2 = independently H, (un)substituted linear or branched chain alkyl; R3 = CHY=CHX, H, linear or branched chain alkyl, Ph, 2-methyl-1,3-thiazolinyl, 2-, 3-, or 4-furanyl, 2-, 3-, or 4-pyridyl, imidazolyl, 2-methyl-1,3-oxazolinyl, 3- or 6-indolyl; X = H,

linear or branched chain alkyl, Ph, 2-methyl-1,3-thiazolinyl, 2-, 3-, or 4-furanyl, 2-, 3-, or 4-pyridyl, imidazolyl, 2-methyl-1,3-oxazolinyl, 3- or 6-indolyl; Y = H, linear or branched chain alkyl; X = O, substituted NOH, substituted NNH<sub>2</sub>; n = 1-2, R<sub>4</sub> = linear or branched chain alkyl, (un)substituted aryloxyalkyl, trialkylsilyl, aryldialkylsilyl, diarylalkylsilyl, troarylsilyl; R<sub>5</sub> = tertiaryalkyl; R<sub>6</sub> = H, t-butyloxycarbonyl, amyloxycarbonyl, (trialkylsilyl)alkyloxycarbonyl, (dialkylarylsilyl)alkoxycarbonyl, benzyl, trialkylsilyl, dialkylarylsilyl, alkylarylsilyl, triarylsilyl, linear or branched acyl, (un)substituted aroyl] and their intermediates are described. Activities of novel compns. based on epothilones and I and methods for the treatment of cancer and cancer which has developed a multidrug-resistant phenotype are presented.

RE.CNT 3        THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5    ANSWER 11 OF 3097    CAPLUS    COPYRIGHT 2003 ACS

AN    2001:149465    CAPLUS

DN    134:357748

TI    Ab initio calculations of anions of closo-alane and gallane Al<sub>6</sub>H<sub>6</sub><sup>2-</sup> and Al<sub>12</sub>H<sub>12</sub><sup>2-</sup> and Al<sub>12</sub>H<sub>12</sub>L salts with cations L = Li<sup>+</sup>, Na<sup>+</sup>, Be<sup>2+</sup>, Mg<sup>2+</sup>, Al<sup>3+</sup>, H<sup>+</sup> coordinated inside and outside the icosahedral Al<sub>12</sub> cluster

AU    Charkin, O. P.; Klimenko, N. M.; Schleyer, P. v. R.

CS    Inst. Problem Khim. Fiz., RAN, Chernogolovka, Russia

SO    Zhurnal Neorganicheskoi Khimii (2000), 45(10), 1678-1690

CODEN: ZNOKAQ; ISSN: 0044-457X

PB    MAIK Nauka/Interperiodica Publishing

DT    Journal

LA    Russian

AB    The authors used HF and DFT-B3LYP methods with 6-31G\* and 6-311+G\*\* basis sets to calc. geometries, vibrational, magnetic, and energy characteristics of isomers of Al<sub>6</sub>H<sub>6</sub><sup>2-</sup>, Ga<sub>6</sub>H<sub>6</sub><sup>2-</sup>, Al<sub>12</sub>H<sub>12</sub><sup>2-</sup>, Ga<sub>12</sub>H<sub>12</sub><sup>2-</sup> and ti title salts.

L5    ANSWER 12 OF 3097    CAPLUS    COPYRIGHT 2003 ACS

AN    2001:148215    CAPLUS

DN    134:230147

TI    Superiority of DMAH to DMEAA for Al CVD technology

AU    Matsushashi, Hideki; Lee, Chang-Hun; Nishimura, Takamasa; Masu, Kazuya; Tsubouchi, Kazuo

CS    Research Institute of Electrical Communication, Tohoku University, Sendai, 980-8577, Japan

SO    Materials Science in Semiconductor Processing (1999), 2(4), 303-308

CODEN: MSSPFQ; ISSN: 1369-8001

PB    Elsevier Science Ltd.

DT    Journal

LA    English

AB    The superiority of dimethylaluminumhydride [Me<sub>2</sub>AlH, DMAH] to dimethylethylaminealane [AlH<sub>3</sub>NMe<sub>2</sub>Et, DMEAA] was studied from the view point of Al CVD technol. in ULSI manufg. Both DMAH and DMEAA have the same filling capability such as surface morphol. and step coverage. For deposition reproducibility, the smaller activation energy is more suitable for manufg. The activation energy of Al deposition is 0.38 [eV] for DMAH and 0.74 [eV] for DMEAA. These results mean the reproducibility of Al thickness using DMAH is superior to that using DMEAA. For safe storage and precise precursor delivery, the precursor should be chem. stable. From the results of measuring the pressure increase in vessel, DMAH has superior chem. stability to DMEAA. Manufg. app. such as Al CVD cluster module requires the deposition selectivity that is defined as Al deposition only on the desired areas of wafer surface and not on any parts of cluster module. Using DMAH, Al is deposited on barrier metal surface of Si wafer, while Al is not deposited on the sealed anodic oxidized Al or the synthetic quartz. DMAH showed excellent selectivity in comparison with DMEAA. Therefore, DMAH is superior to DMEAA as a precursor for the

Al CVD technol. in ULSI manufg.

RE.CNT 15      THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5    ANSWER 13 OF 3097    CAPLUS    COPYRIGHT 2003 ACS  
AN    2001:145699    CAPLUS  
DN    135:112539  
TI    Ab initio models for six-center multiple proton exchange and ion pair  
      formation assisted by Lewis acids  
AU    van Eikema Hommes, Nicolaas J. R.; Heidrich, Dietmar; von Rague Schleyer,  
      Paul  
CS    Computer-Chemie-Centrum, Univ. Erlangen-Nurnberg, Erlangen, D-91052,  
      Germany  
SO    Journal of Molecular Modeling [online computer file] (2000),  
      6(9), 563-574  
      CODEN: JMMOFK; ISSN: 0948-5023  
      URL: <http://link.springer.de/link/service/journals/00894/papers/0006009/00060563.pdf>  
PB    Springer-Verlag  
DT    Journal; (online computer file)  
LA    English  
AB    High level ab initio and d. functional calcns., extrapolated to  
      QCISD(T)/6-311+G(3df,2p)//MP2/6-31+G\*\*+ZPE, reveal that cyclic ion pairs  
      can form in the hydrogen bonded complexes of haloboric acids BHnX3-n-HX, X  
      = F, Cl, with Lewis bases HX, H2O, CH3OH, and NH3, even in isolation  
      (e.g., in the gas phase). The intrinsic acidities (deprotonation  
      energies) required for protonation of these bases with formation of gas  
      phase ion pairs are calcd. to be < 295 kcal/mol for water, < 301 kcal/mol  
      for methanol, and < 306 kcal/mol for ammonia; such values are common for  
      acidic sites in zeolites. All gas phase ion pairs prefer sym. bidentate  
      or tridentate structures. In the other cases where hydrogen bonded  
      complexes prevail, sym. ion pair-like transition structures for multiple  
      hydrogen exchange are computed.

RE.CNT 45      THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5    ANSWER 14 OF 3097    CAPLUS    COPYRIGHT 2003 ACS  
AN    2001:141767    CAPLUS  
DN    134:298131  
TI    Antiwear and extreme-pressure activity of some sulphur, nitrogen and boron  
      compounds  
AU    Herdan, J. M.  
CS    ICERP S.A., Ploiesti, 2000, Rom.  
SO    Journal of the Balkan Tribological Association (2000), 6(3-4),  
      145-150  
      CODEN: JBTA4; ISSN: 1310-4772  
PB    Scientific Bulgarian Communications Ltd.  
DT    Journal  
LA    English  
AB    Compds. contg. sulfur and nitrogen are well known additives for  
      lubricating oils. They are mainly antiwear and extreme-pressure  
      additives, but some of them are antioxidant and corrosion inhibitors, too.  
      Boron compds. have also found applications as antiwear and  
      extreme-pressure additives but their practical use is rather limited  
      because of stability and hydrolysis problems. We succeeded in  
      synthesizing new additives contg. sulfur, nitrogen and boron in the same  
      mol., compds. which are quite stable to storage and hydrolysis. The  
      thermal and storage stability was evaluated using warm and cold cycles and  
      IR spectra. Hydrolytic stability was tested on a 5% soln. of the additive  
      in Neutral 100 paraffinic base oil, in the presence of 2% water. Every 48  
      h the oil was analyzed and changes in the IR spectra were recorded. The  
      storage and hydrolytic stability of the additives is comparable with  
      common overbased calcium sulfonates normally used in engine oil  
      formulations. The antiwear and extreme-pressure performances of the

additives were evaluated on the four ball machine. After the introduction of the boron in the mol. a remarkable enhancement in these properties was obsd.

RE.CNT 1        THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5    ANSWER 15 OF 3097    CAPLUS    COPYRIGHT 2003 ACS  
AN    2001:141019    CAPLUS  
DN    134:310740  
TI    Triphenylbutylphosphonium borohydride: a selective reducing agent  
AU    Mohanazadeh, Farajollah; Tajbakhsh, Mahmoud; Haghdadi, Mina  
CS    Institute of Chemistry, Faculty of Science, Mazandaran University,  
      Babolsar, Iran  
SO    International Journal of Chemistry (2000), 10(2), 191-194  
      CODEN: INJCEW  
PB    Institute of Science & Technology  
DT    Journal  
LA    English  
OS    CASREACT 134:310740  
AB    The utility of triphenylbutylphosphonium borohydride as a reducing agent  
      was studied. This reductant reduces aldehydes, ketones, and acid  
      chlorides to their corresponding alcs. It shows excellent selectivity and  
      chemoselectivity in redn. of aldehydes in the presence of ketones.

RE.CNT 10       THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5    ANSWER 16 OF 3097    CAPLUS    COPYRIGHT 2003 ACS  
AN    2001:122559    CAPLUS  
DN    134:274057  
TI    Growth and study of metal Al nanoobjects on GaAs  
AU    Vostokov, N. V.; Danil'tsev, V. M.; Drozdov, M. N.; Drozdov, Yu. N.;  
      Murel, A. V.; Khrykin, O. I.; Shashkin, V. I.  
CS    Inst. Fiz. Mikrostruktur, RAN, Nizhniy Novgorod, Russia  
SO    Poverkhnost (2000), (11), 84-88  
      CODEN: PFKMDJ; ISSN: 0207-3528  
PB    Nauka  
DT    Journal  
LA    Russian  
AB    Aluminum film were deposited immediately after epitaxial growth of GaAs  
      layer by the chem. vapor deposition technique with a dimethylethylamine  
      alane source and H2 as a carrier gas. The film morphol., compn. and  
      microstructure were studied by at. force microscopy (AFM), Auger electron  
      spectroscopy and X-ray diffraction. Al film resistivity was measured with  
      photolithog. formed bridges, and the Al/n-GaAs Schottky barrier properties  
      were measured with circular mesas. When the deposition temp. increased  
      from 130.degree.C to 360.degree.C the film roughness and barrier  
      properties became worse. At the same time the preferred Al grain  
      orientation was found to vary from the Al(111) texture at low temps. to  
      the epitaxial Al(110) at high ones. The AFM scan is shown to provide  
      fairly accurate angles between micrograin facets. The obtained facet  
      orientations are explained by the general laws of crystal growth, and the  
      results affirm the assumption of impurity absence at the  
      metal-semiconductor interface.

L5    ANSWER 17 OF 3097    CAPLUS    COPYRIGHT 2003 ACS  
AN    2001:94884    CAPLUS  
DN    134:295854  
TI    Reduction of piperidino- and related sec. amino(dihalo)boranes with LiAlH4  
      in toluene and related reactions  
AU    Maringgele, Walter; Noltemeyer, Mathias; Teichgraber, Jorg; Meller, Anton  
CS    Institute of Inorganic Chemistry, University of Gottingen, Gottingen,  
      D-37077, Germany  
SO    Main Group Metal Chemistry (2000), 23(12), 735-760  
      CODEN: MGMCE8; ISSN: 0792-1241



PB Freund Publishing House Ltd.

DT Journal

LA English

AB The products of the redn. of dihalo(diorganoamino)boranes with  $\text{LiAlH}_4$  in toluene depend upon the steric requirement of the amino substituents. It shows that upon using different procedures to produce secondary-amino(dihydro)boranes the results depend critically from the solvent, the stoichiometry of the educts and the temp. applied beyond the sterical factors. However, certain procedures are preferably used to produce distinct moieties. Eight procedures (in part using different ratios of the educts) were applied and evaluated for their results. Mixts. of products were explored by NMR and MS. Pure compds. are characterized by NMR:  $^1\text{H}$ ,  $^{11}\text{B}$ ,  $^{13}\text{C}$ , MS and elemental analyses or high resoln. MS. An x-ray structure anal. is presented for dimeric piperidinoborane.

L5 ANSWER 18 OF 3097 CAPLUS COPYRIGHT 2003 ACS

AN 2001:89842 CAPLUS

DN 134:139547

TI 3a-Tosyloxymethyltropene(N8-B)-borane

AU Batsanov, Andrei S.; Howard, Judith A. K.; O'Hagan, David; Tavasli, Mustafa

CS Dep. Chem., Univ. Durham, Durham, DH1 3LE, UK

SO Acta Crystallographica, Section C: Crystal Structure Communications (2000), C56(11), E512-E513

CODEN: ACSCEE; ISSN: 0108-2701

PB Munksgaard International Publishers Ltd.

DT Journal

LA English

AB [Alternative name: 8-methyl-8-azabicyclo[3.2.1]octan-3-ylmethyl p-toluenesulfonate(N8-B)-borane],  $\text{C}_{16}\text{H}_{26}\text{BNO}_3\text{S}$ , has the tosyloxymethyl substituent in an endo position. The  $\text{BH}_3$  group is equatorial and the (N-bonded) Me group is axial, relative to the six-membered heterocycle. The N-B bond of 1.649(8) Å. is one of the longest known. Crystallog. data are given.

RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 19 OF 3097 CAPLUS COPYRIGHT 2003 ACS

AN 2001:87005 CAPLUS

DN 134:216463

TI Complexes of heteroscorpionate trispyrazolylborate anionic ligands. Part I. The crystal structure and reactivity of thiocyanato[hydrobis(3-phenylpyrazolyl)(3-tert-butylpyrazolyl)borato]cobalt(II) complex

AU Lukasiewicz, Marta; Ciunik, Zbigniew; Wolowicz, Stanislaw

CS Department of Chemistry, University of Wrocław, Wrocław, 50-383, Pol.

SO Polyhedron (2000), 19(20-21), 2119-2125

CODEN: PLYHDE; ISSN: 0277-5387

PB Elsevier Science Ltd.

DT Journal

LA English

AB The high-spin  $\text{Co(II)}$  complexes with homoscorpionate hydrotris(3-phenylpyrazolyl)borate (TpPh) and heteroscorpionate complexes  $\text{Tp}'\text{Co(X)}$ , where  $\text{Tp}' = \text{hydrobis(3-phenylpyrazolyl)(3-tert-butylpyrazolyl)borate}$   $\{\text{HB(3-Phpz)}_2\text{(3-t-Bupz)}\}$  anionic ligands were studied. The former tripodal ligand provides intermediate steric hindrance for the central metal ion, which is able to adopt two addnl. donors from thiocyanate and neutral ligands like pyrazole (pzH) and MeOH, or two O donors from the lactate anion. Replacement of one of three 3-Ph substituents in TpPh by the tert-Bu one produces a ligand of high steric hindrance which gave tetracoordinate  $\text{Tp}'\text{Co(X)}$  complexes, where X = thiocyanate or monodentate lactate. The complexes were studied by the  $^1\text{H}$  NMR spectroscopic method in soln. and two of them,  $\text{TpPhCo(NCS)(pzH)}$  and  $\{\text{HB(3-Phpz)}_2\text{(3-t-Bupz)}\}\text{Co(NCS)}$ , were characterized structurally by x-ray crystallog.

RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 20 OF 3097 CAPLUS COPYRIGHT 2003 ACS  
 AN 2001:86119 CAPLUS  
 DN 134:123828  
 TI [2-(1H-Inden-3-yl)ethyl]diphenylphosphine-borane  
 AU Groux, Laurent F.; Zargarian, Davit  
 CS Departement de Chimie, Universite de Montreal, Montreal, QC, H3C 3J7, Can.  
 SO Acta Crystallographica, Section C: Crystal Structure Communications (2000), C56(8), E366-E367  
 CODEN: ACSCEE; ISSN: 0108-2701  
 PB Munksgaard International Publishers Ltd.  
 DT Journal  
 LA English  
 AB The title compd., C<sub>23</sub>H<sub>24</sub>BP, crystallizes in the centrosym. space group P2<sub>1</sub>/c, with one mol. in the asym. unit. The indene moiety is essentially planar. The P-B bond length is 1.923(3) Å, which is within the expected range. Crystallog. data are given.  
 RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 21 OF 3097 CAPLUS COPYRIGHT 2003 ACS  
 AN 2001:66054 CAPLUS  
 DN 134:359212  
 TI Recent advances in ab initio time-dependent Hartree-Fock theory and their applications to predict nonlinear optical properties of semiconductor nanoclusters  
 AU Karna, Shashi P.; Korambath, Prakashan P.  
 CS Air Force Research Laboratory, Space Vehicles Directorate, Kirtland AFB, NM, 87117-5776, USA  
 SO Materials Research Society Symposium Proceedings (2000), 579(Optical Properties of Materials), 169-178  
 CODEN: MRSPDH; ISSN: 0272-9172  
 PB Materials Research Society  
 DT Journal  
 LA English  
 AB Recent advancements in ab initio time-dependent Hartree-Fock (TDHF) theory have made it a technique of choice for modeling nanoscale nonlinear optical (NLO) materials from 1st-principles. This method was used to study structure-NLO property relations of GaN, GaP and GaAs clusters. The geometry of the clusters used in the study was optimized by ab initio Hartree Fock (HF) calcns. using even tempered Gaussian (ETG) basis set. The clusters used in this study are GamXn (m = 1,3,4,7 and n = 1,3,4,7) where X = N, P, and As. The GamXn clusters are in a charge neutral (q = 0) state for m = n and in appropriately charged state for m not equal to n. The magnitude of the calcd. (hyper)polarizabilities appears to strongly depend on the compn. of the cluster. For the same compn. of heteroatoms, the hyperpolarizability depends on the size as well as the geometry of the cluster. The cluster size-dependence of calcd. (hyper)polarizabilities is more pronounced for the 1st-hyperpolarizability, .beta., than for the polarizability, .alpha.. The calcd. .beta.(-.omega..rho.;.omega.1;.omega.2) corresponding to various 2nd order effects shows the following trend .beta.(-2.omega.;.omega.;.omega.) > .beta.(-.omega.;0;.omega.) > .beta.(0;0,0).  
 RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 22 OF 3097 CAPLUS COPYRIGHT 2003 ACS  
 AN 2001:37486 CAPLUS  
 DN 134:187473  
 TI Hydridoborates and hydridoborato metallates part 26. Preparation and structures of dihydridoborates of lithium and potassium  
 AU Knizek, Jorg; Noth, Heinrich  
 CS Department of Chemistry, Inorganic Chemistry, University of Munich,

Munich, D-81377, Germany  
 SO Journal of Organometallic Chemistry (2000), 614-615, 168-187  
 CODEN: JORCAI; ISSN: 0022-328X  
 PB Elsevier Science S.A.  
 DT Journal  
 LA English  
 AB Alkali metal dihydrido borates were prepd. by three different routes. They were characterized by <sup>11</sup>B-NMR spectroscopy and, in part, by IR spectroscopy. The following compds. were obtained: lithium dihydridodimethylborate and lithium methyltrihydridoborate, (1) and (2), lithium and potassium dihydridodi(tert-butyl)borate, (3) and (4), lithium dihydridodi(cyclopentyl)borate (5), lithium and potassium dihydrido(9-boratabicyclo[3.3.0]nonane), (6a,b), potassium dihydrido(boratacyclohexane) (7), lithium dihydridoboratacycloheptane (8), and lithium dihydrido-9-boratafluorene (9). In the process of the formation of 1 and 7 also Li(H3BMe) (2) and Li<sub>2</sub>(H3B-(CH<sub>2</sub>)<sub>5</sub>-BH<sub>3</sub>) are formed, most likely by a ligand redistribution process which is not operative if bulky organyl groups are bound to the boron atom or if the boron atom is part of a ring system. In case of catecholate no H<sub>2</sub>B(OR)<sub>2</sub>-anions were detected but for ephedrino or dithiolato ligands the corresponding dihydrido borate complexes were readily detected by <sup>11</sup>B-NMR but the latter converted in THF soln. into B(S<sub>2</sub>R')<sub>2</sub> anions. MO calcns. show that the ligand redistribution for H<sub>2</sub>BX<sub>2</sub><sup>-</sup> ions into BH<sub>4</sub><sup>-</sup> and BX<sub>4</sub><sup>-</sup> becomes thermodynamically more favored with increasing electronegativity of the substituent X. Characterization of the new hydrido borate species is usually unambiguous, but Li[H<sub>2</sub>BO(C<sub>6</sub>H<sub>4</sub>)<sub>2</sub>] (10) shows an anomalous temp. dependent behavior in THF soln. which can be attributed to an equil. involving Li(2H, 2O), Li(2H, 3O), and Li(3O) structural units. This is supported by the x-ray structure of dimeric 10.cntdot.THF and monomeric 10.cntdot.THF.cntdot.TMEDA. While 9.cntdot.3THF is monomeric and contains doubly bridging H<sub>2</sub>B groups, all other dihydrido diorganyl borates are dinuclear. The interaction between the alkali metal center and the boron bonded H atoms depends on no. and size of the auxiliary ligands. Agostic Li...H-C interactions play a role if .beta.-H atoms are present and when the alkali metal cation is not coordinatively satd. by the auxiliary ligand and the H(B) hydrogens. The most sym. and so far unique arrangement is found for [6a.cntdot.2THF]<sub>2</sub> where all four H(B) hydrogens form Li...H...Li bridges. Also lithium bis(dithiocatecholato)borate, 17.cntdot.2THF is dimeric. Its Li centers are coordinated by four sulfur and two oxygen atoms. These atoms form a double heterocubane structure with two diametral edges missing.

RE.CNT 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 23 OF 3097 CAPLUS COPYRIGHT 2003 ACS  
 AN 2001:36496 CAPLUS  
 DN 134:223074  
 TI Study on the infrared laser-induced photopolymerization of TEGDA by real time FTIR  
 AU Zhang, Shi-hai; Li, Bin; Tang, Li-ming; Yang, Rui; Zhou, Qi-xiang  
 CS Department of Chemical Engineering, Tsinghua University, Beijing, 100084, Peop. Rep. China  
 SO Gongneng Gaofenzi Xuebao (2000), 13(4), 407-410  
 CODEN: GGXUEH; ISSN: 1004-9843  
 PB Gongneng Gaofenzi Xuebao Bianjibu  
 DT Journal  
 LA Chinese  
 AB Real time FTIR (RTFTIR) technique was employed to investigate the IR laser-induced photopolymn. of triethylene glycol diacrylate (TEGDA). A novel cationic cyanine dye-borate complex, 1,3,3,1',3',3'-hexamethyl-11-chloro-10,12-propylene tricarbo-cyanine triphenylbutylborate, which has max. electron absorption wavelength .lambda.max at 786 nm, was used as the photoinitiator. The conversion of double bond (.gamma.) and the polymn. rate (Rp) have been detd. from the drop of the absorption at 1620 cm<sup>-1</sup> and

1635 cm<sup>-1</sup> in FTIR spectra under laser irradiation.  $\gamma$  increased rapidly and reached 15% with corresponding  $R_p$  of 0.0084 mol.cntdot.L-1.cntdot.s-1 in the first 20 s when laser irradiation intensity was 17.0 mW/cm<sup>2</sup>, higher laser irradiation intensity could lead to greater  $\gamma$  and  $R_p$ .  $R_p$  was proportional to the 0.47 power of the laser power at the first few seconds' irradiation. The termination mechanism of photopolymerization was coupling between two propagating radicals at the beginning stage of photopolymerization. Compared with TEGDA, diethylene glycol diacrylate (DEGDA) had shorter soft chain and its final conversion was lower under the same irradiation conditions.

L5 ANSWER 24 OF 3097 CAPLUS COPYRIGHT 2003 ACS

AN 2001:18296 CAPLUS

DN 135:104331

TI Boronated nucleosides for BNCT

AU Tjarks, W.; Wang, J.; Chandra, S.; Ji, W.; Zhuo, J. C.; Lunato, A. J.; Cosqur, G. Y.; Eriksson, S.; Morrison, G. H.; Spielvogel, B. F.

CS Ohio State University, Columbus, OH, USA

SO KURRI-KR (2000), KURRI-KR-54, 157-158

CODEN: KURRBF; ISSN: 1342-0852

DT Report

LA English

AB Twelve N-3 substituted carboranyl thymidine derivs. (several newly synthesized), four thymidine analogs with non-boronated N-3 substituents, and six cyanoboranyl nucleosides were evaluated in phosphoryl transfer assays with recombinant human TK1, TK2, and dCK. For some of the N-3 substituted carboranyl thymidines, the measured phosphorylation rates were 38% that of thymidine. Cyanoboranyl derivs. of thymidine, 2'-deoxycytidine, and 2'-deoxyadenosine showed low but significant phosphorylation rates with TK1, TK2 and dCK. In vitro evaluation of 3-(carboranylbutyl)thymidine in T98G glioblastoma cells using ion microscopy techniques indicated generally homogenous intracellular boron concns. with slightly increased boron intensities in the nuclei of some cells and the chromosomal region of an isolated metaphase cell.

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 25 OF 3097 CAPLUS COPYRIGHT 2003 ACS

AN 2001:11347 CAPLUS

DN 134:202095

TI Synthesis and properties of organo-cyanoborane complexes of pentaamminecobalt(III)

AU Pinnell, Robert P.; Ballew, Nicole L.; Batchelder, Abigail M.; Bleha, Julie L.; Swatik, Sharon A.; Zanella, Andrew W.

CS Joint Science Department, W. M. Keck Science Center, Claremont McKenna Pitzer and Scripps Colleges, Claremont, CA, 91711, USA

SO Synthesis and Reactivity in Inorganic and Metal-Organic Chemistry (2000), 30(10), 1917-1927

CODEN: SRIMCN; ISSN: 0094-5714

PB Marcel Dekker, Inc.

DT Journal

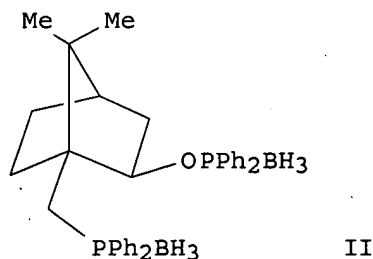
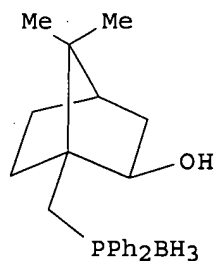
LA English

AB Organo-cyanoborane ligands R-BH<sub>2</sub>-C.tplbond.N (R = trimethylamine, pyridine, or PPh<sub>3</sub>) displace the CF<sub>3</sub>SO<sub>3</sub><sup>-</sup> anion from trifluoromethanesulfonatopentaamminecobalt(III) cations in acetone to yield the resp. nitrile complexes. These new cyanoborane complexes were characterized via elemental anal. and by IR, visible and NMR spectroscopy. The reactions of these complexes in aq. base and attempts to aminate the cyanide group in liq. NH<sub>3</sub> are described. The synthesis of some analogous alkane nitrile complexes is described as well as the kinetics of their hydration reactions in basic media.

RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 26 OF 3097 CAPLUS COPYRIGHT 2003 ACS  
 AN 2001:4577 CAPLUS  
 DN 134:178709  
 TI Intramolecular alkylation of aromatic compounds. Part XXXIV. Synthesis of (pyridinylmethyl)indoles as potential precursors of ergolines  
 AU Reimann, E.; Erdle, W.  
 CS Department for Pharmazie, Zentrum for Pharmaforschung, Ludwig-Maximilians-Universitat Munchen, Munchen, D-81377, Germany  
 SO Pharmazie (2000), 55(12), 907-912  
 CODEN: PHARAT; ISSN: 0031-7144  
 PB Govi-Verlag Pharmazeutischer Verlag  
 DT Journal  
 LA German  
 OS CASREACT 134:178709  
 AB Carbinols prepd. from N-protected 3-indolaldehydes and 2-bromo-5-methoxypyridine are smoothly hydrogenated to 3-[(5-methoxy-2-pyridinyl)methyl]indoles, which in turn give the corresponding indolines by NaCNBH<sub>3</sub>-redn. On treatment of N-benzyl-3-[hydroxy(5-methoxy-2-pyridinyl)methyl]indole with acid, bis(N-benzyl-3-indolyl)(5-methoxy-2-pyridinyl)methane and 5-methoxy-2-pyridinaldehyde are generated. 2-Acetyl-5-methoxypyridine is found as a byproduct of 3-[hydroxy(5-methoxy-2-pyridinyl)methyl]indole. As byproduct of the redn., a borane adduct is detected.  
 RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 27 OF 3097 CAPLUS COPYRIGHT 2003 ACS  
 AN 2001:3428 CAPLUS  
 DN 134:207970  
 TI A concise ex chiral pool approach to novel bidentate camphane phosphane ligands  
 AU Sell, Thorsten; Laschat, Sabine; Dix, Ina; Jones, Peter G.  
 CS Institut fur Organische Chemie, Technische Universitat Braunschweig, Braunschweig, 38106, Germany  
 SO European Journal of Organic Chemistry (2000), (24), 4119-4124  
 CODEN: EJOCFK; ISSN: 1434-193X  
 PB Wiley-VCH Verlag GmbH  
 DT Journal  
 LA English  
 GI



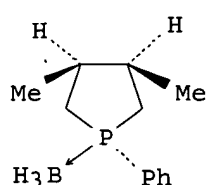
AB The bidentate hydroxy phosphane I and the phosphane phosphinite II, each bearing a camphane skeleton, were prepd. in five and six steps (52% and 28% yield), resp., from (1S)-(+)-camphorsulfonic acid via the triethylsilyl-protected iodide as a key intermediate. An X-ray crystal structure was obtained for II.  
 RE.CNT 49 THERE ARE 49 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 28 OF 3097 CAPLUS COPYRIGHT 2003 ACS  
AN 2000:907818 CAPLUS  
DN 134:89866  
TI Growth and characterization of aluminum oxide (Al<sub>2</sub>O<sub>3</sub>) thin films by  
plasma-assisted atomic layer controlled deposition  
AU Jeong, Chang-Wook; Lee, Jang-Sik; Joo, Seung-Ki  
CS School of Materials Science and Engineering, Seoul National University,  
Seoul, 151-742, S. Korea  
SO Taehan Kumsok, Chaeryo Hakhoechi (2000), 38(10), 1395-1399  
CODEN: TKHABB  
PB Korean Institute of Metals and Materials  
DT Journal  
LA Korean  
AB Aluminum oxide thin films were deposited by plasma-assisted at. layer  
controlled deposition method in the temp. range of 100-125.degree.C using  
DMEAA (Dimethylethylamine alane [(CH<sub>3</sub>)<sub>2</sub>(C<sub>2</sub>H<sub>5</sub>)N:AlH<sub>3</sub>]) as a source gas. Al  
was deposited by plasma-assisted ALD (At. Layer Deposition) method. And  
then, the Al films were oxidized into Al<sub>2</sub>O<sub>3</sub> by the plasma oxidn. in the  
same chamber without breaking the vacuum. For phys. and elec.  
measurements, Al<sub>2</sub>O<sub>3</sub> thin films of 15 nm thickness were prep'd. by  
repetition of the above mentioned process. Thus prep'd. Al<sub>2</sub>O<sub>3</sub> thin films  
showed a refractive index of 1.68. The thickness and the refractive index  
fluctuation of the film over a 4 in. wafer were .+- .2.3% and .+- .1.9%,  
resp., for at. layer controlled film, while those were .+- .7.8%, .+- .6.4%  
for all the sputter-deposited films. The leakage c.d. and breakdown field  
were measured to be about 10<sup>-8</sup> .ANG./cm<sup>2</sup> at 1 MV/cm and 7 MV/cm, resp.  
Considerable improvement of the elec. properties could be realized by the  
post oxygen-plasma annealing at 200.degree.C.

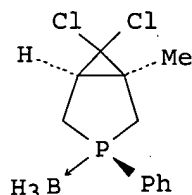
L5 ANSWER 29 OF 3097 CAPLUS COPYRIGHT 2003 ACS  
AN 2000:893362 CAPLUS  
DN 134:155821  
TI On the choice of precursors for the MOVPE-growth of high-quality  
Al<sub>0.30</sub>Ga<sub>0.70</sub>As/GaAs v-groove quantum wires with large subband spacing  
AU Kaluza, A.; Schwarz, A.; Gauer, D.; Hardtdegen, H.; Nastase, N.; Luth, H.;  
Schapers, T.; Meertens, D.; Maciel, A.; Ryan, J.; O'Sullivan, E.  
CS ISI, Forschungszentrum Julich, Julich, 52425, Germany  
SO Journal of Crystal Growth (2000), 221, 91-97  
CODEN: JCRGAE; ISSN: 0022-0248  
PB Elsevier Science B.V.  
DT Journal  
LA English  
AB MOVPE growth is used to prep. high-quality v-groove quantum wires in the  
AlGaAs/GaAs system. The particular aim of this work is to find suitable  
precursor combinations and growth conditions with which quantum wire  
structures can be achieved, where only the lowest subband is occupied and  
on which truly 1D transport can be studied. Different precursor  
combinations of GaEt<sub>3</sub>, GaMe<sub>3</sub>, AlMe<sub>3</sub>, and Me<sub>2</sub>AlC<sub>2</sub>H<sub>4</sub>NH<sub>2</sub> were employed for  
growth of the Al<sub>0.30</sub>Ga<sub>0.70</sub>As barrier layer. Calcns. of the 2D-Schrodinger  
equation show, that suitable quantum wire geometries are obtained when  
using combinations with GaMe<sub>3</sub>. High-quality material is achieved at  
575.degree. for GaMe<sub>3</sub>/Me<sub>2</sub>AlC<sub>2</sub>H<sub>4</sub>NH<sub>2</sub> and 595.degree. for GaMe<sub>3</sub>/AlMe<sub>3</sub>. In  
general, lower growth temps. lead to the preferential lower radii of  
curvature for a given precursor combination. A comparison of the best two  
combinations shows that GaMe<sub>3</sub>/AlMe<sub>3</sub> is best suited for growth of the  
Al<sub>0.30</sub>Ga<sub>0.70</sub>As barrier layer with respect to the intended application.  
RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 30 OF 3097 CAPLUS COPYRIGHT 2003 ACS  
AN 2000:887420 CAPLUS  
DN 134:237554  
TI One-pot transformation of cyclic phosphine oxides to phosphine-boranes by  
dimethyl sulfide-borane

AU Keglevich, Gyorgy; Fekete, Melinda; Chuluunbaatar, Tungalag; Dobo, Andras;  
 Harmat, Veronika; Tke, Laszlo  
 CS Department of Organic Chemical Technology, Budapest University of  
 Technology and Economics, Budapest, 1521, Hung.  
 SO Perkin 1 (2000), (24), 4451-4455  
 CODEN: PERKF9; ISSN: 1470-4358  
 PB Royal Society of Chemistry  
 DT Journal  
 LA English  
 GI



I



II

AB Different types of cyclic phosphine oxides, such as tetrahydrophosphole oxide, phosphabicyclo[3.1.0]hexane 3-oxide and phosphabicyclo[2.2.1]heptene 7-oxides were efficiently converted to phosphine-boranes, e.g. I and II, under relatively mild conditions by reaction with 4.4 equiv. of di-Me sulfide-borane. The more strained hetero-ring the starting phosphine oxide has, the easier to accomplish the change in the P-function, that takes place through the corresponding phosphine intermediate. It is noteworthy that the imide carbonyl groups in starting materials were fully reduced by the borane. The crystal structure of I and II were detd.

RE.CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 31 OF 3097 CAPLUS COPYRIGHT 2003 ACS

AN 2000:887413 CAPLUS

DN 134:237553

TI New potential (P,S)-ligands containing tetrathiafulvalene

AU Pellon, Pascal; Brule, Emilie; Bellec, Nathalie; Chamountin, Karine;  
 Lorcy, Dominique

CS Synthese et Electrosynthese Organiques, UMR CNRS 6510, Universite de  
 Rennes 1, Rennes, 35042, Fr.

SO Perkin 1 (2000), (24), 4409-4412

CODEN: PERKF9; ISSN: 1470-4358

PB Royal Society of Chemistry

DT Journal

LA English

AB The synthesis of novel (P,S)-ligands contg. tetrathiafulvalene (TTF) from preformed TTF derivs. is reported. These compds. were prepd. by using borane as protecting group for the phosphine. The electrochem. properties of these new ligands are presented.

RE.CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 32 OF 3097 CAPLUS COPYRIGHT 2003 ACS

AN 2000:881152 CAPLUS

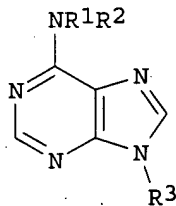
DN 134:29660

TI Preparation of boronic acid-containing purines, nucleosides, and amino acids as inhibitors of bacterial adenine DNA methyltransferases

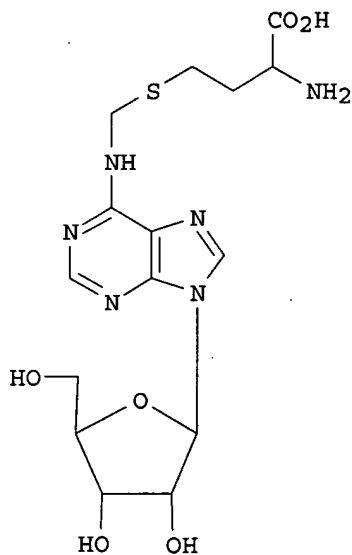
IN Benkovic, Stephen J.; Shapiro, Lucille; Baker, Stephen J.; Wahnon, Daphne

C.; Wall, Mark  
 PA Penn State Research Foundation, USA  
 SO PCT Int. Appl., 55 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000075142	A2	20001214	WO 2000-US14479	20000525 <--
	WO 2000075142	A3	20010628		
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	EP 1181291	A2	20020227	EP 2000-964879	20000525
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2003501431	T2	20030114	JP 2001-502424	20000525
PRAI	US 1999-135870P	P	19990525		
	US 1999-154582P	P	19990917		
	US 2000-174256P	P	20000103		
	WO 2000-US14479	W	20000525		
OS	MARPAT 134:29660				
GI					



I



II

AB This invention provides broad-spectrum antibiotics I R<sup>1</sup>-R<sup>3</sup> are the same or different and are independently hydrogen, lower alkyl, aryl or substituted aryl, lower alkoxy, lower alkoxyalkyl, or cycloalkyl or cycloalkyl alkoxy, where each cycloalkyl group has from 3-7 members, where up to two of the cycloalkyl members are optionally hetero atoms selected from oxygen and nitrogen, and where any member of the alkyl, aryl or cycloalkyl group is optionally substituted with halogen, lower alkyl or lower alkoxy, aryl or substituted aryl, and where R<sup>3</sup> can be ribose, deoxyribose or



phosphorylated derivs. thereof, R1-R3 are not all hydrogen and when R3 is ribose, deoxyribose or phosphorylated derivs. thereof, one of R1 or R2 is not hydrogen, that are inhibitors of bacterial adenine DNA methyltransferases. Thus, amino acid-contg. nucleoside II was prepd. and tested in vitro for its antibacterial activity (EC50 = 2 mM, Ki = 160 .mu.M).

L5 ANSWER 33 OF 3097 CAPLUS COPYRIGHT 2003 ACS

AN 2000:878091 CAPLUS

DN 134:186127

TI CVD of conformal alumina thin films via hydrolysis of AlH3(NMe2Et)

AU Fahlman, Bradley D.; Barron, Andrew R.

CS Department of Chemistry, Rice University, Houston, TX, 77005, USA

SO Advanced Materials for Optics and Electronics (2000), 10(3-5), 135-144

CODEN: AMELE7; ISSN: 1057-9257

PB John Wiley & Sons Ltd.

DT Journal

LA English

AB Deposition of highly conformal alumina thin films was carried out by hydrolysis of the liq. alane precursor, AlH3(NMe2Et). Depositions onto Si wafers, quartz and C fibers were all carried out using a hot-wall atm. pressure CVD (APCVD) system. Optimum growth conditions are at 165.degree. and with an AlH3(NMe2Et):H2O ratio of <1:25. Films were characterized by SEM, microprobe and elec. cond. measurements. Growth rates were of the order of 40-80 .ANG. min-1 at 165.degree.. The conformality of the films was illustrated using Si wafers that were etched prior to deposition. Deposition onto ZnS EL-phosphor particles was accomplished in a simple fluidized-bed APCVD reactor. The deposited films were conformal and continuous. No significant redn. in the initial brightness or change in the color balance of the phosphor was obsd. from the coating process.

RE.CNT 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 34 OF 3097 CAPLUS COPYRIGHT 2003 ACS

AN 2000:872160 CAPLUS

DN 134:147660

TI Reactions of 1,3,2,4-dithiadiphosphetane-2,4-disulfides with alkyl borates

AU Nizamov, Il'yas S.; Sergeenko, Gul'nur G.; Batyeva, Elvira S.; Azancheev, Nail M.; Al'fonsov, Vladimir A.

CS A. E. Arbuzov Institute of Organic and Physical Chemistry, Russian Academy of Sciences, Kazan, 420088, Russia

SO Main Group Chemistry (2000), 3(2), 129-135

CODEN: MGCHE7; ISSN: 1024-1221

PB Gordon & Breach Science Publishers

DT Journal

LA English

OS CASREACT 134:147660

AB New B derivs. of dithiophosphonic acids 4-ROC6H4P(S)(OR1)SB(OR1)2 (R = Me, Et, R1 = CHMe2, CH2CHMe2; R = Me, R1 = CMe3) 3a-e and 4-MeOC6H4P(S)(OCH2CHMe2)SBPh2 5 were obtained in low to moderate yields by the reactions of Lawesson's reagent 1a and its Et homolog 1b with trialkyl borates (R1O)3B 2a-c (same R1) and Me2CHCH2OBPh2 4. Low frequency ultrasound irradiation (22 kHz, power 130 W) leads to redn. in reaction temp. and time in the reactions studied. The prepd. compds. were identified by IR, 1H and 31P NMR and mass spectra as well as elemental analyses.

RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 35 OF 3097 CAPLUS COPYRIGHT 2003 ACS

AN 2000:863747 CAPLUS

DN 134:35034

TI Photosensitive composition for photoresist used for manufacture of printed circuit board

IN Natori, Michiko; Hidaka, Takahiro  
PA Hitachi Chemical Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 12 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000338659	A2	20001208	JP 1999-149011	19990528 <--
PRAI	JP 1999-149011		19990528		

AB The title photosensitive compn. comprises (A) a binder polymer, (B) a photopolymerizable compd. having an ethylenic unsatd. group, (C) a dimer of 2,4,5-triarylimidazole, and (D) a sulfonium borate. This photosensitive compn. is used as a photoresist for manuf. of a printed circuit board.

L5 ANSWER 36 OF 3097 CAPLUS COPYRIGHT 2003 ACS  
AN 2000:862634 CAPLUS  
DN 134:252392

TI Synthesis and molecular structure of 1,12-dicarba-closo-dodecaborane(12)-1,12-dithiol, 1,12-(SH)2-1,12-C2B10H10, in the gaseous phase, determined by electron diffraction and ab initio calculations; geometrical consequences of three-dimensional aromaticity in carbaboranes 1,12-X2-1,12-C2B10H10

AU Hnyk, Drahomir; Holub, Josef; Hofmann, Matthias; von Rague Schleyer, Paul; Robertson, Heather E.; Rankin, David W. H.

CS Institute of Inorganic Chemistry, Academy of Sciences of the Czech Republic, Rez near Prague, CZ-250 68, Czech Rep.

SO Dalton (2000), (24), 4617-4622  
CODEN: DALTFG

PB Royal Society of Chemistry  
DT Journal  
LA English

OS CASREACT 134:252392

AB The mol. structure of 1,12-dicarba-closo-dodecaborane(12)-1,12-dithiol, 1,12-(SH)2-1,12-C2B10H10, prepd. by an improved synthesis, was detd. by gas-phase electron diffraction restrained by ab initio calcns. The carbaborane core, shown by calcns. at the MP2(fc)/6-31G\* level to be very close to D5d symmetry, gave good agreement between theor. and exptl. 11B NMR chem. shifts. A model of the entire mol. in overall C2 symmetry led to an exptl. geometry (RG = 0.077), in good agreement with the theor. findings. The substituents do not distort the cage significantly. The well detd. parameters, the C-B, B(2)-B(3), and B(2)-B(7) distances, 170.6(4), 177.5(3) and 176.5(9) pm resp. (ra), are consistent with the analogous parameters established exptl. for other 1,12-disubstituted 1,12-dicarbadoecaboranes. Whereas the C-B and B-B distances are relatively const. in the MP2(fc)/6-31G\* geometries of carbaboranes 1,12-X2-1,12-C2B10H10 (in addn. to SH, X = H, Li, BeH, BH2, CH3, SiH3, NH2, OH, F and Cl) the C(1).cntdot..cntdot..cntdot.C(12) distances and B(2)-C(1)-C(12) angles are appreciably sensitive to the nature of X, in a similar manner to the para-disubstituted benzene derivs., 2 .times. B(2)-C(1)-C(12) being viewed as an analog of the ipso angle in the latter.

RE.CNT 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 37 OF 3097 CAPLUS COPYRIGHT 2003 ACS  
AN 2000:862617 CAPLUS  
DN 134:260421

TI A zinc thiolate species which mimics aspects of the chemistry of the Ada repair protein and matrix metalloproteinases: the synthesis, structure and reactivity of the tris(2-mercapto-1-phenylimidazolyl)hydroborato complex [TmPh]ZnSPh

AU Bridgewater, Brian M.; Fillebeen, Tauqir; Friesner, Richard A.; Parkin,

Gerard

CS Department of Chemistry, Columbia University, New York, NY, 10027, USA  
SO Dalton (2000), (24), 4494-4496  
CODEN: DALTFG

PB Royal Society of Chemistry

DT Journal

LA English

AB The tris(2-mercapto-1-phenylimidazolyl)hydroborato ligand, [TmPh], was used to prep. the Zn phenylthiolate deriv., [TmPh]ZnSPH, which provides a good structural model for Zn enzymes that possess [Zn(Cys)<sub>4</sub>] motifs. The reactivity of the thiolate linkage in [TmPh]ZnSPH mimics the chem. of the Ada protein and the activation mechanism of matrix metalloproteinases.

RE.CNT 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 38 OF 3097 CAPLUS COPYRIGHT 2003 ACS

AN 2000:862045 CAPLUS

DN 134:116107

TI Total Synthesis of (.-)-Cytisine

AU O'Neill, Brian T.; Yohannes, Daniel; Bundesmann, Mark W.; Arnold, Eric P.

CS Pfizer Global Research and Development, Pfizer Inc., Groton, CT, 06340, USA

SO Organic Letters (2000), 2(26), 4201-4204

CODEN: ORLEF7; ISSN: 1523-7060

PB American Chemical Society

DT Journal

LA English

OS CASREACT 134:116107

AB The nicotine partial agonist cytisine was prepd. in five steps featuring an "in situ" Stille or Suzuki biaryl pyridine coupling. Differentiation of the pyridyl rings was accomplished via selective benzylation and then redn. of a pyridinium ring. The penultimate diazabicyclo[3.3.1]nonane intermediate was obtained with high diastereoselectivity. A similar sequence has been employed for the synthesis of novel deriv. 9-methoxycytisine.

RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 39 OF 3097 CAPLUS COPYRIGHT 2003 ACS

AN 2000:859494 CAPLUS

DN 134:131573

TI C-H activation by direct borane-hydrocarbon dehydrogenation: kinetic and thermodynamic aspects

AU Goldfuss, Bernd; Knochel, Paul; Bromm, Lars O.; Knapp, Kolja

CS Organisch-Chemisches Institut der Universitat Heidelberg, Heidelberg, 69120, Germany

SO Angewandte Chemie, International Edition (2000), 39(22), 4136-4139

CODEN: ACIEF5; ISSN: 1433-7851

PB Wiley-VCH Verlag GmbH

DT Journal

LA English

AB To study the factors influencing the reactivity and selectivity of direct, uncatalyzed borane-hydrocarbon dehydrogenations, the kinetic and thermodyn. aspects of the dehydrogenation reaction of BH<sub>3</sub> with H-E (E = CH<sub>3</sub>, NH<sub>2</sub>, OH) and C<sub>6</sub>H<sub>5</sub>X (X = NMe<sub>2</sub>, OMe, t-Bu, Me, H, F, Cl, Br, COMe, CF<sub>3</sub>, CN, NO<sub>2</sub>) were studied by theor. methods (B3LYP/MP2). The results suggest that relatively small activation barriers (.1 to req. 30 kcal/mol) are to be expected for dehydration reactions between borane and hydrocarbons that occur via four-center transition states.

RE.CNT 48 THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 40 OF 3097 CAPLUS COPYRIGHT 2003 ACS

AN 2000:856665 CAPLUS  
 DN 134:147956  
 TI Preparation and characterization of organic-inorganic hybrid materials incorporating diphosphino moieties. Study of the accessibility of the phosphorus atoms included into the material  
 AU Bezombes, Jean-Philippe; Chuit, Claude; Corriu, Robert J. P.; Reye, Catherine  
 CS Laboratoire de Chimie Moleculaire et Organisation du Solide. UMR 5637, Universite Montpellier II, Montpellier, F-34095, Fr.  
 SO Canadian Journal of Chemistry (2000), 78(11), 1519-1525  
 CODEN: CJCHAG; ISSN: 0008-4042  
 PB National Research Council of Canada  
 DT Journal  
 LA English  
 AB The hydrolysis-polycondensation by the sol-gel process of the arom. diphosphines (X<sub>3</sub>SiC<sub>6</sub>H<sub>4</sub>)<sub>2</sub>PC<sub>6</sub>H<sub>4</sub>P(C<sub>6</sub>H<sub>4</sub>SiX<sub>3</sub>)<sub>2</sub>, which are rigid mols. bearing four hydrolysable SiX<sub>3</sub> groups (X = OiPr, H), leads to new org.-inorg. hybrid materials, characterized by solid state <sup>13</sup>C, <sup>29</sup>Si, and <sup>31</sup>P NMR spectroscopies. The accessibility of the P centers incorporated into the xerogel obtained from the diphosphine with X = OiPr was studied. All the P atoms reacted quant. with H<sub>2</sub>O<sub>2</sub>, S<sub>8</sub>, and CH<sub>3</sub>I but only 20% with the more bulky reagent W(CO)<sub>5</sub>.cndot.THF. This result is explained by the rigidity of the inorg. network resulting from the high no. of hydrolysable Si-OiPr groups in the precursor.

RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 41 OF 3097 CAPLUS COPYRIGHT 2003 ACS  
 AN 2000:855026 CAPLUS  
 DN 134:163099  
 TI Radical-based reduction of phosphine sulfides and phosphine selenides by (Me<sub>3</sub>Si)<sub>3</sub>SiH  
 AU Romeo, R.; Wozniak, L. A.; Chatgililoglu, C.  
 CS I.Co.C.E.A., Consiglio Nazionale delle Ricerche, Bologna, 40129, Italy  
 SO Tetrahedron Letters (2000), 41(50), 9899-9902  
 CODEN: TELEAY; ISSN: 0040-4039  
 PB Elsevier Science Ltd.  
 DT Journal  
 LA English  
 OS CASREACT 134:163099  
 AB Tris(trimethylsilyl)silane reacted with phosphine sulfides RR<sub>1</sub>R<sub>2</sub>P(S) (R = R<sub>1</sub> = R<sub>2</sub> = n-Bu, Ph; R = Me, R<sub>1</sub> = t-Bu, R<sub>2</sub> = Ph; R = Me, R<sub>1</sub> = Ph, R<sub>2</sub> = o-MeOC<sub>6</sub>H<sub>4</sub>) and phosphine selenides RR<sub>1</sub>R<sub>2</sub>P(Se) (R = R<sub>1</sub> = R<sub>2</sub> = n-Bu, Ph) under free radical conditions to give the corresponding phosphines RR<sub>1</sub>R<sub>2</sub>P or phosphine-borane complexes RR<sub>1</sub>R<sub>2</sub>P-BH<sub>3</sub> after reaction of crude product with THF-BH<sub>3</sub> in good yields. Stereochem. studies on P-chiral phosphine sulfides showed that these redns. proceed with retention of configuration.

RE.CNT 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 42 OF 3097 CAPLUS COPYRIGHT 2003 ACS  
 AN 2000:852707 CAPLUS  
 DN 134:202029  
 TI Synthesis and characterization of the neutral dinuclear hydrido complexes of platinum with bridging phosphides cis-Pt<sub>2</sub>(H)<sub>2</sub>(PHBut<sub>2</sub>)<sub>2</sub>(.mu.-H)(.mu.-PBut<sub>2</sub>) (Pt-Pt) and trans-[Pt(H)(PHBut<sub>2</sub>)(.mu.-PBut<sub>2</sub>)]<sub>2</sub> (Pt-Pt)  
 AU Mastorilli, Piero; Palma, Mariangela; Fanizzi, Francesco Paolo; Nobile, Cosimo Francesco  
 CS Centro C.N.R. M.I.S.O. and Istituto di Chimica del Politecnico di Bari, Bari, 70125, Italy  
 SO Dalton (2000), (23), 4272-4276  
 CODEN: DALTFG  
 PB Royal Society of Chemistry

DT Journal  
LA English  
AB Trans-PtCl<sub>2</sub>(PHBut<sub>2</sub>)<sub>2</sub> (1) reacts with NaBH<sub>4</sub> in THF affording the dinuclear Pt(II) complexes cis-Pt<sub>2</sub>(H)<sub>2</sub>(PHBut<sub>2</sub>)<sub>2</sub>(μ-H)(μ-PBut<sub>2</sub>)(Pt-Pt) (2) and trans-[Pt(H)(PHBut<sub>2</sub>)(μ-PBut<sub>2</sub>)]<sub>2</sub> (Pt-Pt) along with the B adduct BH<sub>3</sub>.cntdot.PHBut<sub>2</sub>. Pure 2 can be obtained in 85% yield in the reaction carried out in the presence of two equiv. of di-tert-butylphosphine.

RE.CNT 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 43 OF 3097 CAPLUS COPYRIGHT 2003 ACS

AN 2000:852385 CAPLUS

DN 134:207486

TI Evidence of a dihydrogen bond in gas phase: Phenol-borane-dimethylamine complex

AU Naresh Patwari, G.; Ebata, Takayuki; Mikami, Naohiko

CS Department of Chemistry, Graduate School of Science, Tohoku University, Sendai, 980-8578, Japan

SO Journal of Chemical Physics (2000), 113(22), 9885-9888

CODEN: JCPSA6; ISSN: 0021-9606

PB American Institute of Physics

DT Journal

LA English

AB We report here the formation of a gas phase complex bound by a dihydrogen bond between phenol and borane-dimethylamine in supersonic jets. Laser induced fluorescence excitation, fluorescence detected IR, and IR-UV hole-burning spectroscopies were carried out to characterize the complex. Quantum chem. calcns. were used to derive the structure of the complex, providing excellent agreement with the spectroscopic data. To the best of our knowledge, we for the first time established exptl. the formation of a dihydrogen bonded complex in the gas phase.

RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 44 OF 3097 CAPLUS COPYRIGHT 2003 ACS

AN 2000:851552 CAPLUS

DN 134:131594

TI Diphosphine oxide-Bronsted acid complexes as novel hydrogen-bonded self-assembled molecules

AU Matsukawa, Satoru; Imamoto, Tsuneo

CS Department of Chemistry Faculty of Science, Chiba University, Chiba, 263-8522, Japan

SO Journal of the American Chemical Society (2000), 122(51), 12659-12662

CODEN: JACSAT; ISSN: 0002-7863

PB American Chemical Society

DT Journal

LA English

AB Novel hydrogen-bonded supramols. based on interactions between an acid and a base were prepd. from (R,R)-1,2-bis(1-adamantylmethylphosphinyl)ethane (1) and tetrafluoroboric acid. Both linear and cyclic structures were obsd. Recrystn. from CH<sub>2</sub>Cl<sub>2</sub>-AcOEt gave the linear supramol. The structure was confirmed by single-crystal x-ray anal. On the other hand, the cyclic dimer was produced by recrystn. from CHCl<sub>3</sub>-AcOEt. The structure was estd. by electron spray ionization mass spectrometry and single crystal x-ray anal. Significantly different enantioselectivities were obsd. in asym. protonation reactions of these two supramols. with silyl enolates.

RE.CNT 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 45 OF 3097 CAPLUS COPYRIGHT 2003 ACS

AN 2000:848932 CAPLUS

DN 134:109740

TI Synthesis, characterization and x-ray structural studies of novel  
 dinuclear silver(I) complexes of poly(azolyl)borate ligands  
 AU Effendy; Lobbia, Giancarlo Gioia; Pettinari, Claudio; Santini, Carlo;  
 Skelton, Brian W.; White, Allan H.  
 CS Department of Chemistry, The University of Western Australia, Nedlands,  
 6907, Australia  
 SO Inorganica Chimica Acta (2000), 308(1-2), 65-72  
 CODEN: ICHAA3; ISSN: 0020-1693  
 PB Elsevier Science S.A.  
 DT Journal  
 LA English  
 AB Ag(I) complexes of tris- and tetrakis-(pyrazolyl)borates,  
 tetrakis(imidazol-1-yl)borate, and hydrotris(3-methyl-1-imidazolyl-2-  
 thione)borate, the previously recorded [Ag{HB(pz)3}]2,  
 [Ag{HB(3,5-Me2pz)3}]2, [Ag{B(pz)4}]n, together with [Ag{HB(4-Brpz)3}]2,  
 [Ag{B(3-Mepz)4}]n, [Ag{B(Im)4}]n (Him = imidazole) and [Ag{Tm}]2 (Tm =  
 hydrotris(3-methyl-2-thioxo-1-imidazolyl)borate) were synthesized and  
 further characterized by elemental anal., IR, Far-IR, 1H, 13C NMR  
 spectroscopy, and in the case of [Ag{Tm}]2, also by a single-crystal x-ray  
 study. Variable-temp. 1H NMR spectra indicate that [Ag{HB(3,5-Me2pz)3}]2,  
 [Ag{HB(4-Brpz)3}]2, and [Ag{B(pz)4}]n are fluxional, with a pyrazolyl ring  
 exchange process occurring rapidly at 293 but not at 193 K, whereas  
 [Ag{HB(pz)3}]2 and the cryst. form of [Ag{HB(3,5-Me2pz)3}]2 are not  
 fluxional, even at room temp. The reactions between K[HB(pz)3],  
 K[HB(3,5-Me2pz)3], K[B(pz)4] or K[Tm] and AgNO3 in presence of N-and  
 S-donor, unidentate or bidentate ligands such as pyrazole, imidazole,  
 1-10-phenanthroline and 1-methylimidazoline(2,3H)thione (Hmimt) were  
 studied. The authors also report the results of pos. ion FAB MS studies  
 carried out for selected derivs.

RE.CNT 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 46 OF 3097 CAPLUS COPYRIGHT 2003 ACS  
 AN 2000:848774 CAPLUS  
 DN 134:100915  
 TI Linear and nonlinear optical properties of three-coordinate organoboron  
 compounds  
 AU Yuan, Zheng; Collings, Jonathan C.; Taylor, Nicholas J.; Marder, Todd B.;  
 Jardin, Christophe; Halet, Jean-Francois  
 CS Department of Chemistry, University of Waterloo, Waterloo, ON, N2L 3G1,  
 Can.  
 SO Journal of Solid State Chemistry (2000), 154(1), 5-12  
 CODEN: JSSCBI; ISSN: 0022-4596  
 PB Academic Press  
 DT Journal; General Review  
 LA English  
 AB Three-coordinate boron, isoelectronic with a trigonal planar carbonium  
 ion, possesses a vacant p orbital which can conjugate with an org. .pi.  
 system and thus serve as a .pi. acceptor. A series of sym. compds. of the  
 general form (mes)2BXB(mes)2 [mes = mesityl = 2,4,6 Me3C6H2; X =  
 conjugated org. .pi. system such as -(p-C6H4)n- or trans-trans-CH=CH-(p-  
 C6H4)n-CH=CH-] as well as donor-acceptor compds. of the general form  
 DXB(mes)2 (D = .pi. donor such as MeO, MeS, H2N, Me2N, Ph2P, ferrocenyl; X =  
 conjugated org. .pi. system such as -C6H4-, -C6H4-CH=CH-,  
 -C6H4-C.tplbond.C-, -C6H4-CH=CH-C6H4-) were studied, and representative  
 single-crystal structures as well as linear (UV-vis absorption and  
 fluorescence) and second- and third-order nonlinear optical properties [by  
 elec. field-induced second harmonic generation (EFISH) and third harmonic  
 generation (THG)] were examd. The bulky mesityl groups protect the boron  
 centers from hydrolysis. Many of the compds. are highly fluorescent, with  
 the unsym. ones displaying limited solvatochromic behavior in absorption  
 spectra but significant solvatochromic effects in their emission spectra  
 consistent with small dipole moments in the ground state and large dipole  
 moments in the excited states. Results from other groups on the use of

related boron compds. as either electron-transport materials or emitting agents in electroluminescent devices, and on the prepn. and optical properties of three-coordinate boron-contg. conjugated polymers are presented. Preliminary results of extended Huckel (EH) and d. functional (DF) mol.-orbital calcns. on representative sym. diboron compds. and extended Huckel tight-binding (EHTB) calcns. on a model boron-contg. polymer are reported. The B(mes)2 group is a good .pi. acceptor, and three-coordinate boron moieties show significant promise for use in mol. and polymeric optical materials. These data are followed by a review with 9 refs. on crystal structure data of various boron dimesityl compds. (c) 2000 Academic Press.

RE.CNT 74 THERE ARE 74 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 47 OF 3097 CAPLUS COPYRIGHT 2003 ACS  
AN 2000:845267 CAPLUS  
DN 134:115720  
TI Efficient coupling reactions of lithium alkynyl(triisopropoxy)borates with aryl halides: application to the antifungal terbinafine synthesis  
AU Oh, Chang Ho; Jung, Seung Hyun  
CS Department of Chemistry, Hanyang University, Seoul, 133-791, S. Korea  
SO Tetrahedron Letters (2000), 41(44), 8513-8516  
CODEN: TELEAY; ISSN: 0040-4039  
PB Elsevier Science Ltd.  
DT Journal  
LA English  
OS CASREACT 134:115720  
AB Thermally stable lithium alkynyl(triisopropoxy)borates were reacted with aryl halides in the presence of Pd catalysts to give the corresponding cross-coupling products in excellent yields. The present methodol. was successfully applied to the antifungal terbinafine synthesis.

RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 48 OF 3097 CAPLUS COPYRIGHT 2003 ACS  
AN 2000:837026 CAPLUS  
DN 134:23533  
TI Direct imaging-type lithographic original plate  
IN Goto, Kazuki; Kawamura, Ken; Nagase, Koichi  
PA Toray Industries, Inc., Japan  
SO Jpn. Kokai Tokkyo Koho, 10 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000330267	A2	20001130	JP 1999-142636	19990524 <--
PRAI	JP 1999-142636		19990524		

AB The title lithog. original plate comprises a substrate coated with a heat-sensitive layer contg. a compd. capable of being decompd. by the action of laser irradiation, a thermosetting compd., and a polyester and overcoated with an ink-repellent layer. The neg.-working lithog. original plate is capable of direct platemaking using laser beams and shows improved productivity and printing durability.

L5 ANSWER 49 OF 3097 CAPLUS COPYRIGHT 2003 ACS  
AN 2000:837025 CAPLUS  
DN 134:23532  
TI Direct imaging-type waterless lithographic original plate  
IN Nagase, Koichi; Ichikawa, Shigehiko; Ikeda, Norimasa  
PA Toray Industries, Inc., Japan  
SO Jpn. Kokai Tokkyo Koho, 10 pp.  
CODEN: JKXXAF

DT Patent  
LA Japanese  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000330266	A2	20001130	JP 1999-137154	19990518 <--
PRAI	JP 1999-137154		19990518		

AB The title lithog. original plate comprises a substrate coated successively with a heat insulating layer contg. .gtoreq.50 wt.% of an epoxy-urea resin, a heat-sensitive layer contg. a compd. capable of being decompd. by the action of laser irradiation and a thermosetting compd., and an ink-repellent layer. The neg.-working lithog. original plate is capable of direct platemaking using laser beams and shows improved image reproducibility and printing durability.

L5 ANSWER 50 OF 3097 CAPLUS COPYRIGHT 2003 ACS

AN 2000:836422 CAPLUS

DN 134:163097

TI Asymmetric synthesis of P-stereogenic o-hydroxyaryl-phosphine (borane) and phosphine-phosphinite ligands

AU Moulin, D.; Bago, S.; Bauduin, C.; Darcel, C.; Juge, S.

CS Unite mixte Universite de Cergy-Pontoise/ESCOM-Synth. Org. Select. et Chim. Organomet., FRE CNRS 2126, Cergy-Pontoise, 95031, Fr.

SO Tetrahedron: Asymmetry (2000), 11(19), 3939-3956

CODEN: TASYE3; ISSN: 0957-4166

PB Elsevier Science Ltd.

DT Journal

LA English

OS CASREACT 134:163097

AB The first asym. synthesis of P-stereogenic 2-hydroxyarylphosphine ligands is described, using borane complexation methodol. This synthesis is based on the highly stereoselective prepn. of bromoarylphosphinite boranes, leading to the 2-hydroxyarylphosphine derivs., by an intramol. ortho Fries-like rearrangement mediated in basic conditions. The o-anisyl-2-hydroxynaphthylphenylphosphine borane has been decomplexed in EtOH, affording the P(III)-stereogenic hydroxyarylphosphine ligand with 84% yield. The interest of the hydroxyarylphosphine borane is also demonstrated by the prepn. of a new class of phosphine-phosphinite ligands, by trapping the rearrangement products first with chlorodiphenylphosphine, Ph<sub>2</sub>PCl, then with borane. The corresponding phosphine-phosphinites are obtained and purified as diborane complexes, with the decomplexation of these borane complexes being achieved by heating with dabco, to afford the free hybrid ligands with retention of the configuration at the P-atom (isolated yield up to 53%). The crystal structure of (S)-(-)-methyl-(1-bromo-2-naphthyl)phenylphosphinite borane was detd.

RE.CNT 84 THERE ARE 84 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT